



RecyclingWorks in Massachusetts

Organics Subcommittee: December 1, 2015



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Recycling Works in Massachusetts

- Helps businesses and institutions
 - Maximize waste diversion
 - Save money
 - Waste Ban Compliance
 - Customer/Employee satisfaction
- Funded by MassDEP, delivered under contract by the Center for EcoTechnology

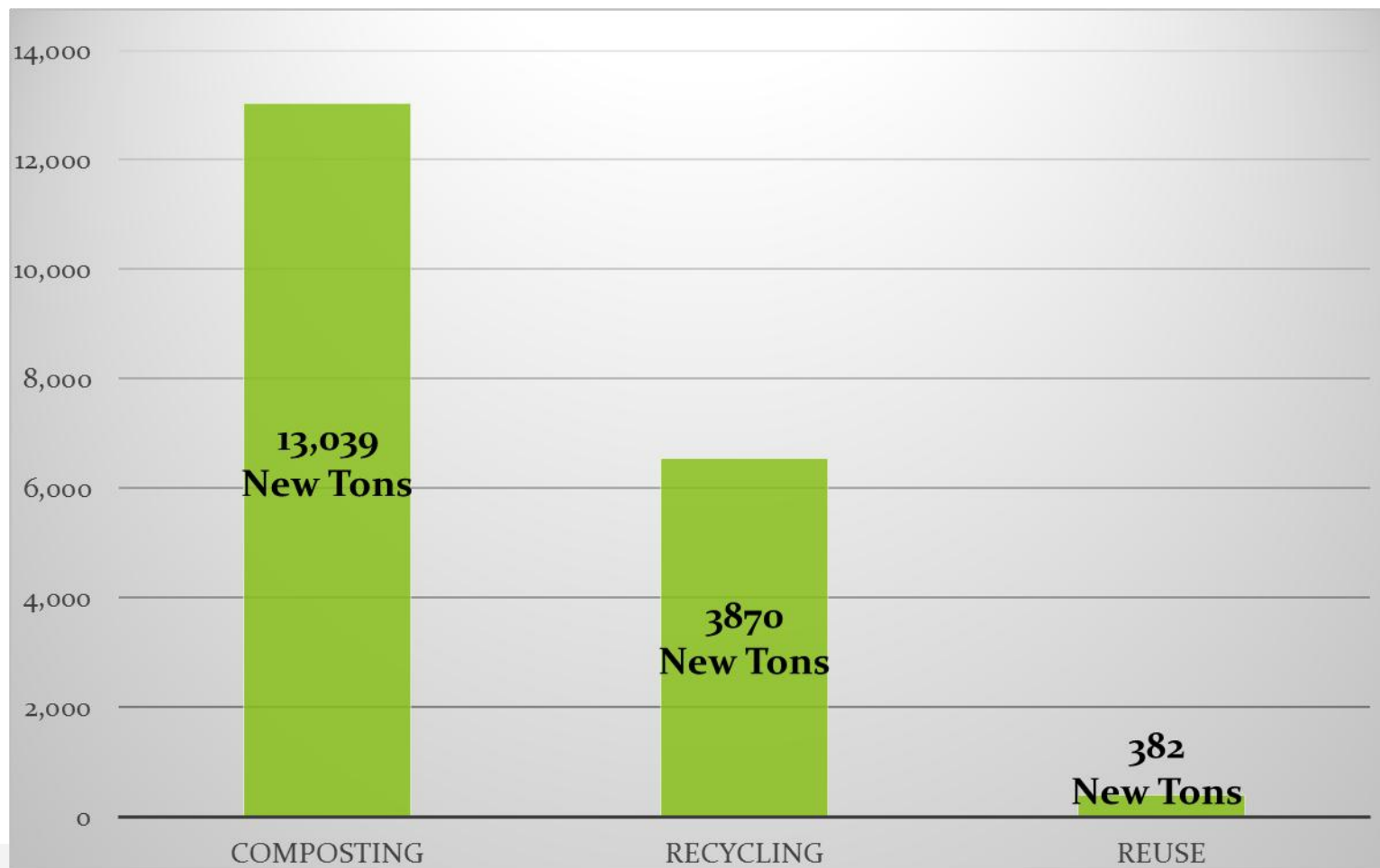


RecyclingWorks in Massachusetts

Services include:

- Online Resources
- Email and Phone Hotline
- Technical Assistance
- Events and Workshops
- WasteWise Program Administration

Total Diversion Impact FY12 - FY15





Online Resources

New Resources Added 2015

On-site Systems for Food Waste

Overview of listed on-site systems for food waste diversion
(Listed alphabetically by company name)

Page	Company Name	Model Name	Output Material	Capacity	Volume/Weight Reduction (%)	Energy Use	Price Range (USD)
9	BIOFerm Energy Systems	COCCUS	Digestate for direct land application or further processing	15-30 tons/day	30-60%	~15-17%	\$450,000 - \$850,000
10	BIOFerm Energy Systems	Dry Fermentation	Digestate for direct land application or further processing	43,000 – 380,500 lbs/day	Typical 40% volume	~8-10%/kW	\$400,000 - \$1,200,000
11	BIOFerm Energy Systems	EUCOLino	Digestate for direct land application or further processing	15,000-30,000 lbs/day	30-60% reduction	~20%/kWe	\$250,000 - \$850,000
12	BioHltech America	Eco-safe Digester 400	Grey water / nutrient-neutral effluent	800 lbs/day	100%	605 kWh/month	\$19,000 - \$40,000
13	BioHltech America	Eco-safe Digester 800	Grey water / nutrient-neutral effluent	1,600 lbs/day	100%	605 kWh/month	\$19,000 - \$40,001
14	BioHltech America	Eco-safe Digester 1200	Grey water / nutrient-neutral effluent	2,400 lbs/day	100%	605 kWh/month	\$19,000 - \$40,002
15	DariTech Inc dba TR Environmental	EnviroDrum Model 6-20	Meets PFRP for in-vessel compost	Up to 6 cu yd/day	20-80%	30-100 kWh/day	\$140,000 - \$200,000
16	DariTech Inc dba TR Environmental	EnviroDrum Model 6-32	Meets PFRP for in-vessel compost	Up to 10 cu yd/day	20-80%	50-150 kWh/day	\$200,000 - \$250,000
17	DariTech Inc dba TR Environmental	EnviroDrum Model 8-40	Meets PFRP for in-vessel compost	Up to 25 cu yd/day	20-80%	150-400 kWh/day	\$275,000 - \$350,000
18	DariTech Inc dba TR Environmental	EnviroDrum Model 5-14	Meets PFRP for in-vessel compost	Up to 3 cu yd/day	20-80%	25-75 kWh/day	\$90,000 - \$130,000
19	EC ALL Ltd	BigHanna T60	Ready compost	44-77 lbs/day	90%	1.11 kWh/day (indoor)	\$45,000
20	EC ALL Ltd	BigHanna T120	Ready compost	88-154 lbs/day	90%	1.11 kWh/day (indoor)	\$55,000
21	EC ALL Ltd	Big Hanna T240	Ready compost	187-374 lbs/day	90%	1.53 kWh/day (indoor)	\$84,000
22	EC ALL Ltd	BigHanna T480	Ready compost	251-750 lbs/day	90%	2.35 kWh/day (indoor)	\$154,000
23	Eco Eco Solutions	LFC-050	Liquid output, connected to drain	200 lbs/day	99%	4.7 kWh/day	\$14,250



On-Site Systems
for Managing
Food Waste



Special Event Recycling & Composting



TIPS FOR RECYCLING & COMPOSTING AT SPECIAL EVENTS

Planning

- ☐ Involve important stakeholders in the planning stage, including waste haulers, concessionaires, and partner organizations.
- ☐ Know your waste hauler and where they will be taking your recycling and compost material.
- ☐ Decide your program's focus: the vendor (back-of-house) waste only or include guest (front-of-house) waste too.
- ☐ Choose the types of waste receptacles to use at your event. Some haulers may be able to supply bins as part of their service contract.
- ☐ Use a consistent color system throughout the event space to ensure that each bin is easily identified. The most popular colors to use are black or brown for trash, blue for recycling, and yellow or green for compost.
- ☐ Design signage using both graphics and text to indicate what goes in each bin and what does not.
- ☐ Consider adding a clause to vendor contracts requiring them to use recyclable or compostable to-go materials for easy sorting.
- ☐ Plan to monitor and evaluate the recycling program during the event and discuss your waste tracking needs with your hauler ahead of time.
- ☐ Outline responsibilities and logistics of the recycling program in an email to concessionaires, exhibitors, vendors, and event staff prior to the event.
- ☐ Train volunteers and event staff and consider stationing them at waste bins throughout the event space.
- ☐ Group waste receptacle types (trash, recycling, and compost) together to minimize contamination – where there's a trash bin, there should be a recycling bin next to it.

During the Event

- ☐ Distribute receptacles throughout the event grounds, placing more in high-traffic or food-driven areas.
- ☐ Place signage on all visible sides of the receptacle, as well as the top, if space permits.
- ☐ Empty trash, recycling, and compost bins regularly throughout the event to minimize overfilling.
- ☐ Station volunteers at high traffic areas to help guests sort their recyclables and other waste materials.

After the Event

- ☐ Continue recycling and monitoring during the breakdown of the event.
- ☐ Use waste data collected throughout the event to generate results of your event's recycling program and to inform your next event's planning sessions.
- ☐ Identify opportunities for increased waste reduction, reuse, and donation.
- ☐ Ask for feedback from volunteers, guests, and your hauler to continually improve your waste diversion program.

Additional Resources

- ☐ MassDEP Marshfield Case Study - <http://www.mass.gov/eea/docs/dep/recycle/reduce/m-thru-x/marshfield-fair.pdf>
- ☐ EPA Lowell Folk Festival Case Study - <http://www.lowellfolkfestival.org/lff%20recycling%20-%20epa%20recognition.pdf>
- ☐ FCSWMD Tool Kit - <http://www.mass.gov/eea/docs/dep/recycle/reduce/toolkit/rspecialg.pdf>
- ☐ NERC Best Management Practices - http://nerc.org/documents/special_event_bmps_final.pdf
- ☐ EPA Tip Sheet - <http://www.epa.gov/wastes/conserve/tools/rogo/venues/events.htm>



Other Website Updates

- Ceiling tile & X-ray film recycling
- Gleaning added to food waste page
- Printable version of Commercial Organics Ban Threshold Estimation Guide added
- List of organizations interested in accepting food for depackaging added
- Hauler/Processor listings added and updated on the “Find-a-Recycler” database
- Video Case Studies:
 - New: America’s Food Basket and Deerfield Academy
 - In Process: Kowloon’s and Mass College of Art & Design



Website Statistics

Total Website Visits: 2012-2015





Hotline Intakes, 2012-2015

Fiscal Year 2012: 138

Fiscal Year 2013: 301

Fiscal Year 2014: 468

Fiscal Year 2015: 827

Fiscal Year 2016 Q1: 402



Hotline Topic Examples

- Hanscom AFB
- Cell phone tracked in recycling
- Cans for 25¢, Seinfeld style undertaking
- Macy's NON Conference Call
- Bumper2Bumper Magazines



Direct Technical Assistance

167 Businesses and Institutions Received
Direct TA in FY15

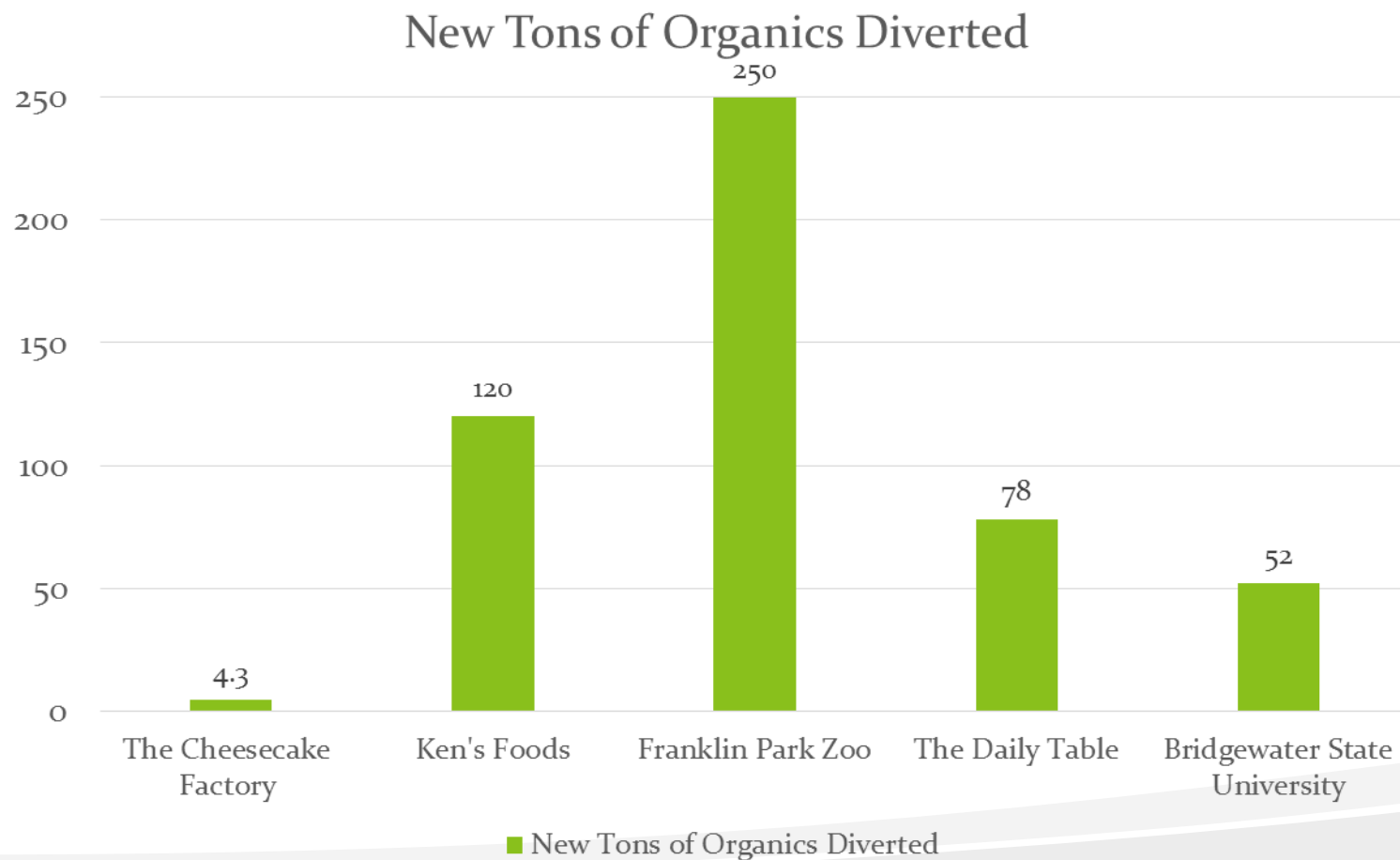


Technical Assistance FY15 & FY16

Type of Assistance	FY15 Goal	FY15 Total	FY16 Goal	FY16 Current
Hospitality	20	16	20	4
Generators Subject to Ban	25	31	30	15
State Facilities	12	13	12	9
Other On-Site TA	30	25	30	25
Mini-TA	50	82	120	67
Totals	137	167	212	120



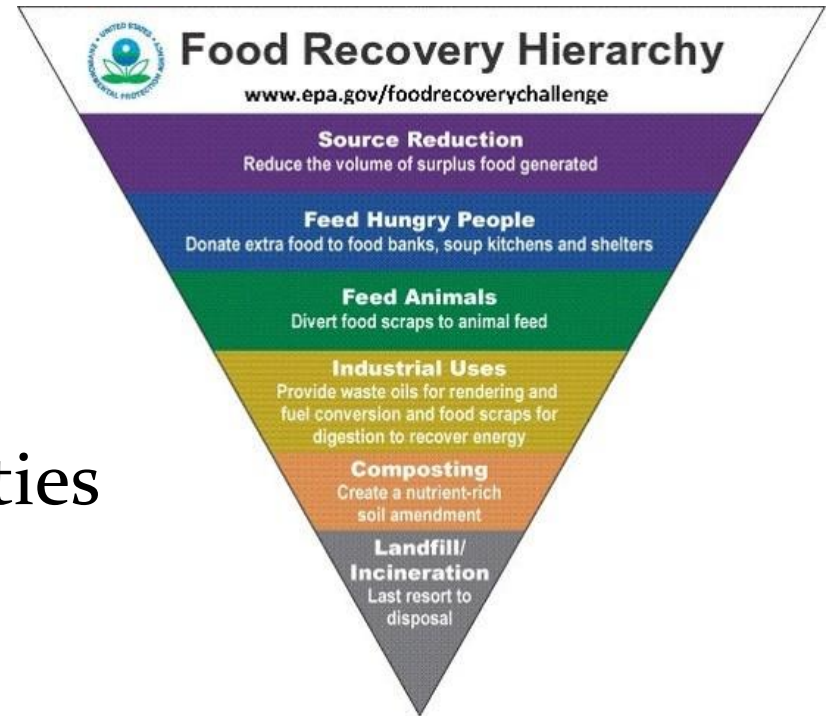
Organics Diversion FY16 Q₁ TA Examples





Looking Forward

- Using EPA Hierarchy
- Improving performance
- Seeking next opportunities





2015 WasteWise Forums

- Spring: Diversion & Reduction Through Food Donation
 - Whole Foods Regional Offices, Cambridge
 - 50 Attendees
 - Presentations from Whole Foods, Lovin' Spoonfuls, and Food Donation Connections
- Fall: Food Donation & Depackaging
 - EPA Regional Offices, North Chelmsford
 - 35 Attendees
 - Presentations from Hannaford's and Exeter Agri-Energy



CURC Forums

- Fall 2015: Food Donation & Mattress Recycling
 - Worcester Polytechnic Institute
 - December 10, 8:30am - 12pm
- Organizations that participate in food donation will present on running a successful program.
- Learn from mattress recyclers about how to divert mattresses from college's waste streams.



Compost Site Technical Assistance

- Three composting industry experts assist compost site operators
- 8 sites receiving assistance
- Provide basic assistance to each site
- Developing more in-depth, customized assistance in FY16



Coming in FY16 ...

- RecyclingWorks website migration to a modern, mobile-friendly template
- Organizing fall and spring C&U forums
- Guidance document for generators to be informed consumers of hauling services
- Compost Workshop in spring 2016



Additional Information

Visit our website at
www.recyclingworksma.com

RecyclingWorks Hotline
(888) 254-5525
info@recyclingworksma.com